

REMARKS/ARGUMENTS

I. 35 USC 112 Rejection Of Claims 12-20 Based Upon Line 7

The Examiner rejected claim 12-20 under 35 U.S.C. 112, first paragraph on the grounds that the term "without subjecting the waste directly to the plasma" is not supported by the specification. The applicant disagrees.

Figure 1 clearly shows a plasma generator 150 surrounded by conduit 140. The conduit is substantially water-tight, and there is no reason whatsoever to believe that the plasma is allowed to escape from the generator, or that any of the waste is allowed to seep into the plasma generator. Moreover, any person in the art would immediately appreciate that the plasma must be separated from the waste or the waste would immediately quench the plasma, rendering the entire device useless. Thus, one of ordinary skill in the art would read the specification to understand that the waste flows past waves emitted out through the plasma generator without the waste actually touching the plasma.

The Examiner argued that Applicant did not provide the page number and line numbers from the specification that supported the newly added limitation. Support for the previously presented amendment in claim 12 and the answer to the Examiner's question can be found on page 4, line 22 – page 5, line 27.

II. 35 USC 112 Clarification Question Regarding Microbes

The Examiner asked how the microbes in the waste are inactivated or killed if the waste is not subjected directly to the plasma. That's the whole point! The inventors discovered that the UV and other waves generated by the plasma are entirely sufficient to sterilize waste, wastes, and other material. The very fact that the Examiner made his comment testifies grandly to the specific point that such an observation is completely novel and non-obvious.

III. 35 USC 112 Clarification Question Regarding the Plasma

The Examiner asked if the plasma recited in line 7 of claim 12 was the same as the waves produced by the RF plasma wave generator. The answer is no. As defined in the specification (which by the way is a definition completely consistent with accepted scientific interpretation) “[p]lasmas are conductive assemblies of charged particles, neutrals and fields that exhibit collective effects.” Spec. P5/L10-11, emphasis added.

It is true that the complex of particles and fields in a plasma supports a wide variety of waves, the waves being claimed are waves radiated from the plasma. That is the whole point of a plasma wave generator; it generates and radiates waves. In case that distinction was not completely clear in the previously pending claims, the Applicant has now amended claim 12 to expressly recite "...carrying the waste past waves radiated by the RF plasma wave generator...."

The examiner argued that “the plasma” in line 7 lacks antecedent basis. *The applicant agrees*, and has amended claim 12 accordingly. Support for the amendment can be found in the specification on page 5, lines 10-21.


IV. 35 USC 112 Clarification Question Regarding The Treatment

The Examiner argued that the limitation “treating the waste at a rate of at least 20 l/hr” is unclear in claims 15, 16, 17, and 20. The Applicant disagrees. The specification specifically states on page 5, lines 1-3, that flow rates of conduit 140 can range from 20 l/h to 2000 l/h. As reasonably read in light of the specification, the limitation “treating the waste at a rate of at least 20 l/hr” relates to the waste flowing past the waves produced by (radiated by) the plasma generator at a rate of at least 20 l/hr.

CONCLUSION

Claims 12-20 are pending in this application. Claims 1-11 are withdrawn. Applicant strongly believes that all claims are allowable as amended.

Respectfully submitted,
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